

111TH CONGRESS  
1ST SESSION

# H. R. 461

To authorize the National Science Foundation to award grants to institutions of higher education to develop and offer education and training programs.

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## IN THE HOUSE OF REPRESENTATIVES

JANUARY 13, 2009

Mr. WU (for himself, Mr. GORDON of Tennessee, Ms. EDDIE BERNICE JOHNSON of Texas, Mr. LANGEVIN, Mr. BILBRAY, Ms. RICHARDSON, Ms. SCHWARTZ, Mr. MILLER of North Carolina, Mr. BOUCHER, Mr. BLUMENAUER, Mr. ROTHMAN of New Jersey, Mr. SENSENBRENNER, Mr. SMITH of Nebraska, and Mr. HALL of Texas) introduced the following bill; which was referred to the Committee on Science and Technology

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## A BILL

To authorize the National Science Foundation to award grants to institutions of higher education to develop and offer education and training programs.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

### 3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “10,000 Trained by  
5 2010 Act”.

### 6 **SEC. 2. FINDINGS.**

7 The Congress finds that—

1           (1) the National Science Foundation has long  
2       been a government leader in strengthening our Na-  
3       tion's information infrastructure;

4           (2) as automation and digitization reach the  
5       healthcare industry, that industry will need to draw  
6       heavily on the expertise of researchers funded by the  
7       National Science Foundation for the collection, proc-  
8       essing, and utilization of information;

9           (3) the National Science Foundation's basic re-  
10      search, demonstrations, and curriculum development  
11      assistance are all required to help make sure the in-  
12      dustry has the knowledge, procedures, and workforce  
13      necessary to take full advantage of advanced com-  
14      munications and information technology;

15          (4) the Bureau of Labor Statistics estimated  
16      that 136,000 Americans were employed in 2000 as  
17      information management professionals in the  
18      healthcare industry alone, with projected growth of  
19      49 percent by 2010; and

20          (5) no systematic plan exists for designing and  
21      implementing systems and information tools and for  
22      ensuring that the healthcare workforce can make the  
23      transition to the information age.

24 **SEC. 3. DEFINITIONS.**

25      In this Act:

1           (1) DIRECTOR.—The term “Director” means  
2           the Director of the National Science Foundation.

3           (2) INFORMATION.—The term “information”  
4           means healthcare information.

5           (3) INSTITUTION OF HIGHER EDUCATION.—The  
6           term “institution of higher education” has the  
7           meaning given that term in section 101 of the High-  
8           er Education Act of 1965 (20 U.S.C. 1001).

9   **SEC. 4. NATIONAL SCIENCE FOUNDATION RESEARCH.**

10          (a) GRANTS.—

11           (1) IN GENERAL.—The Director, in consulta-  
12           tion with the heads of other Federal agencies as ap-  
13           propriate, shall award grants for basic research on  
14           innovative approaches to improve information sys-  
15           tems. Research areas may include—

16                   (A) information studies;

17                   (B) population informatics;

18                   (C) translational informatics; and

19                   (D) data security, integrity, and confiden-  
20           tiality.

21           (2) MERIT REVIEW; COMPETITION.—Grants  
22           shall be awarded under this section on a merit-re-  
23           viewed, competitive basis.

24           (3) AUTHORIZATION OF APPROPRIATIONS.—

25           There are authorized to be appropriated to the Na-

1 tional Science Foundation to carry out this sub-  
2 section—

3 (A) \$3,500,000 for fiscal year 2010;

4 (B) \$3,600,000 for fiscal year 2011;

5 (C) \$3,700,000 for fiscal year 2012; and

6 (D) \$3,800,000 for fiscal year 2013.

7 (b) INFORMATICS RESEARCH CENTERS.—

8 (1) IN GENERAL.—The Director, in consulta-  
9 tion with the heads of other Federal agencies as ap-  
10 propriate, shall award multiyear grants, subject to  
11 the availability of appropriations, to institutions of  
12 higher education (or consortia thereof) to establish  
13 multidisciplinary Centers for Informatics Research.  
14 Institutions of higher education (or consortia there-  
15 of) receiving such grants may partner with one or  
16 more government laboratories, for-profit institutions,  
17 or non-profit institutions.

18 (2) MERIT REVIEW; COMPETITION.—Grants  
19 shall be awarded under this subsection on a merit-  
20 reviewed, competitive basis.

21 (3) PURPOSE.—The purpose of the Centers  
22 shall be to generate innovative approaches in infor-  
23 mation by conducting cutting-edge, multidisciplinary  
24 research, including in the research areas described in  
25 subsection (a)(1).

1           (4) APPLICATIONS.—An institution of higher  
2           education (or a consortium thereof) seeking funding  
3           under this subsection shall submit an application to  
4           the Director at such time, in such manner, and con-  
5           taining such information as the Director may re-  
6           quire. The application shall include, at a minimum,  
7           a description of—

8                   (A) the research projects that will be un-  
9                   dertaken by the Center and the contributions of  
10                  each of the participating entities;

11                  (B) how the Center will promote active col-  
12                  laboration among professionals from different  
13                  disciplines, such as information technology spe-  
14                  cialists, health professionals, administrators,  
15                  and social science researchers; and

16                  (C) how the Center will contribute to in-  
17                  creasing the number of information researchers  
18                  and other professionals.

19           (5) CRITERIA.—In evaluating the applications  
20           submitted under paragraph (4), the Director shall  
21           consider, at a minimum—

22                   (A) the ability of the applicant to generate  
23                   innovative approaches to information and effec-  
24                   tively carry out the research program;

1 (B) the experience of the applicant in con-  
2 ducting research in the information field, and  
3 the capacity of the applicant to foster new mul-  
4 tidisciplinary collaborations;

5 (C) the capacity of the applicant to attract  
6 and provide adequate support for under-  
7 graduate and graduate students to pursue in-  
8 formation research; and

9 (D) the extent to which the applicant will  
10 partner with government laboratories or for-  
11 profit or non-profit entities, and the role the  
12 government laboratories or for-profit or non-  
13 profit entities will play in the research under-  
14 taken by the Center.

15 (6) ANNUAL MEETING.—The Director shall  
16 convene an annual meeting of the Centers in order  
17 to foster collaboration and communication between  
18 Center participants.

19 (7) AUTHORIZATION OF APPROPRIATIONS.—  
20 There are authorized to be appropriated for the Na-  
21 tional Science Foundation to carry out this sub-  
22 section—

23 (A) \$4,500,000 for fiscal year 2010;

24 (B) \$4,600,000 for fiscal year 2011;

25 (C) \$4,700,000 for fiscal year 2012; and

1 (D) \$4,800,000 for fiscal year 2013.

2 **SEC. 5. NATIONAL SCIENCE FOUNDATION INFORMATION**  
3 **PROGRAMS.**

4 (a) CAPACITY BUILDING GRANTS.—

5 (1) IN GENERAL.—The Director, in consulta-  
6 tion with the heads of other Federal agencies as ap-  
7 propriate, shall establish a program to award grants  
8 to institutions of higher education (or consortia  
9 thereof) to establish or improve undergraduate and  
10 master's degree information programs, to increase  
11 the number of students who pursue undergraduate  
12 or master's degrees in information fields, to provide  
13 students with experience in government or industry  
14 related to their information studies, and, to the ex-  
15 tent practicable, to do so using distance learning.

16 (2) MERIT REVIEW; COMPETITION.—Grants  
17 shall be awarded under this subsection on a merit-  
18 reviewed, competitive basis.

19 (3) USE OF FUNDS.—Grants awarded under  
20 this subsection shall be used for activities that en-  
21 hance the ability of an institution of higher edu-  
22 cation (or consortium thereof) to provide high-qual-  
23 ity information education, including certification and  
24 undergraduate and master's degree programs, and

1 to recruit and retain increased numbers of students  
2 to such programs. Activities may include—

3 (A) developing and revising curriculum to  
4 better prepare undergraduate and master's de-  
5 gree students for careers in the information  
6 field;

7 (B) establishing degree and certificate pro-  
8 grams in the information field;

9 (C) creating opportunities in information  
10 research for undergraduate students;

11 (D) acquiring equipment necessary for stu-  
12 dent instruction in these programs, including  
13 the installation of testbed networks for student  
14 use;

15 (E) providing opportunities for faculty to  
16 work with State, local, or Federal Government  
17 agencies, private industry, and other academic  
18 institutions to develop new expertise or to for-  
19 mulate new information research directions;

20 (F) establishing collaborations with other  
21 academic institutions or departments that seek  
22 to establish, expand, or enhance these pro-  
23 grams;

24 (G) establishing student internships for  
25 students in these programs at State, local, and



1 Federal Government agencies or in private in-  
2 dustry;

3 (H) establishing or enhancing bridge pro-  
4 grams in information fields between community  
5 colleges and universities; and

6 (I) any other activities the Director, in  
7 consultation with the heads of other Federal  
8 agencies as appropriate, determines will achieve  
9 the purposes described in paragraph (1).

10 (4) SELECTION PROCESS.—

11 (A) APPLICATION.—An institution of high-  
12 er education (or a consortium thereof) seeking  
13 funding under this subsection shall submit an  
14 application to the Director at such time, in such  
15 manner, and with such contents as the Director  
16 may require. The application shall include, at a  
17 minimum—

18 (i) a description of the applicant's rel-  
19 evant research and instructional capacity,  
20 and in the case of an application from a  
21 consortium of institutions of higher edu-  
22 cation, a description of the role that each  
23 member will play in implementing the pro-  
24 posal;

1 (ii) a comprehensive plan by which the  
2 institution or consortium will build instruc-  
3 tional capacity in information fields;

4 (iii) a description of relevant collabo-  
5 rations with State, local, or Federal Gov-  
6 ernment agencies or private industry that  
7 inform the instructional program;

8 (iv) a survey of the applicant's his-  
9 toric student enrollment and placement  
10 data and a study of potential enrollment  
11 and placement for students enrolled in the  
12 proposed program; and

13 (v) a plan to evaluate the success of  
14 the proposed program, including post-  
15 graduate assessment of graduate school  
16 and job placement and retention rates as  
17 well as the relevance of the instructional  
18 program to graduate study and to the  
19 workplace.

20 (B) AWARDS.—The Director shall ensure,  
21 to the extent practicable, that grants are  
22 awarded under this subsection in a wide range  
23 of geographic areas and categories of institu-  
24 tions of higher education.

1           (5) ASSESSMENT REQUIRED.—The Director, in  
2       consultation with the heads of other Federal agen-  
3       cies as appropriate, shall evaluate the program es-  
4       tablished under this subsection no later than 3 years  
5       after the establishment of the program. At a min-  
6       imum, the Director shall evaluate the extent to  
7       which the grants have achieved their objectives of in-  
8       creasing the quality and quantity of students pur-  
9       suing undergraduate or master’s degrees in informa-  
10      tion fields. The Director shall make this assessment  
11      publicly available.

12           (6) AUTHORIZATION OF APPROPRIATIONS.—  
13      There are authorized to be appropriated to the Na-  
14      tional Science Foundation to carry out this sub-  
15      section—

- 16                   (A) \$9,000,000 for fiscal year 2010;  
17                   (B) \$9,200,000 for fiscal year 2011;  
18                   (C) \$9,400,000 for fiscal year 2012; and  
19                   (D) \$9,600,000 for fiscal year 2013.

20           (b) SCIENTIFIC AND ADVANCED TECHNOLOGY ACT  
21      OF 1992.—

22           (1) GRANTS.—The Director shall provide  
23      grants under the Scientific and Advanced Tech-  
24      nology Act of 1992 for the purposes of section 3(a)  
25      and (b) of that Act, except that the activities sup-

1       ported pursuant to this subsection shall be limited to  
2       improving education in fields related to information.

3           (2) AUTHORIZATION OF APPROPRIATIONS.—

4       There are authorized to be appropriated to the Na-  
5       tional Science Foundation to carry out this sub-  
6       section—

7                   (A) \$7,000,000 for fiscal year 2010;

8                   (B) \$7,200,000 for fiscal year 2011;

9                   (C) \$7,400,000 for fiscal year 2012; and

10                  (D) \$7,600,000 for fiscal year 2013.

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